Zabbix Manual

Welcome to the user manual for Zabbix 2.0 software. These pages are created to help our users successfully manage their monitoring tasks with Zabbix, from the simple to the more complex.

2.0/manual.txt · Last modified: 2012/05/23 11:27 by martins-v

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1 Manual structure

Structure

The content of this Zabbix 2.0 manual is divided into sections and subsections to provide easy access to particular subjects of interest.

When you navigate to respective sections, make sure that you expand section folders to reveal full content of what is included in subsections and individual pages.

Cross-linking between pages of related content is provided as much as possible to make sure that relevant information is not missed by the users.

Sections

Introduction provides general information about current Zabbix software. Reading this section should equip you with some good reasons to choose Zabbix.

Zabbix concepts explain the terminology used in Zabbix and provides details on Zabbix components.

Installation and Quickstart sections should help you to get started with Zabbix. Zabbix appliance is an alternative for getting a quick taster of what it is like to use Zabbix.

Configuration is one of the largest and more important sections in this manual. It contains loads of essential advice about how to set up Zabbix to monitor your environment, from setting up hosts to getting essential data to viewing data to configuring notifications and remote commands to be executed in case of problems.

IT services section details how to use Zabbix for a high-level overview of your monitoring environment.

Web monitoring should help you learn how to monitor the availability of web sites.

Maintenance, Regular expressions, Event acknowledgment and XML export/import are further sections that reveal how to use these various aspects of Zabbix software.

Discovery contains instructions for setting up automatic discovery of network devices, active agents, file systems, network interfaces, etc.

Distributed monitoring deals with the possibilities of using Zabbix in larger and more complex environments.

Web interface contains information specific for using the web interface of Zabbix.

Detailed lists of technical information are included in Appendixes. This is where you will also find FAQ and Zabbix API sections.

2.0/manual/introduction/manual_structure.txt · Last modified: 2012/02/03 10:38 by martins-v
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2 What is Zabbix

Overview

Zabbix was created by Alexei Vladishev, and currently is actively developed and supported by Zabbix SIA.

Zabbix is an enterprise-class open source distributed monitoring solution.

Zabbix is software that monitors numerous parameters of a network and the health and integrity of servers. Zabbix uses a flexible notification mechanism that allows users to configure e-mail based alerts for virtually any event. This allows a fast reaction to server problems. Zabbix offers excellent reporting and data visualisation features based on the stored data. This makes Zabbix ideal for capacity planning.

Zabbix supports both polling and trapping. All Zabbix reports and statistics, as well as configuration parameters, are accessed through a web-based front end. A web-based front end ensures that the status of your network and the health of your servers can be assessed from any location. Properly configured, Zabbix can play an important role in monitoring IT infrastructure. This is equally true for small organisations with a few servers and for large companies with a multitude of servers.

Zabbix is free of cost. Zabbix is written and distributed under the GPL General Public License version 2. It means that its source code is freely distributed and available for the general public.

Commercial support [http://www.zabbix.com/support.php] is available and provided by Zabbix Company.

Learn more about Zabbix features.

Users of Zabbix

Many organisations of different size around the world rely on Zabbix as a primary monitoring platform.

2.0/manual/introduction/about.txt · Last modified: 2011/12/28 10:11 by martins-v

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3 Zabbix features

Overview

Zabbix is a highly integrated network monitoring solution, offering a multiplicity of features in a single package.

Data gathering

- availability and performance checks
- support for SNMP (both trapping and polling), IPMI, JMX monitoring
- custom checks
- gathering desired data at custom intervals
- performed by server/proxy and by agents

Flexible threshold definitions

- you can define very flexible problem thresholds, called triggers, referencing values from the back-end database

Highly configurable alerting

- sending notifications can be customized for the escalation schedule, recipient, media type
- notifications can be made meaningful and helpful using macro variables
- automatic actions include remote commands

Real-time graphing

- monitored items are immediately graphed using the built-in graphing functionality

Web monitoring capabilities

- Zabbix can follow a path of simulated mouse clicks on a web site and check for functionality and response time

Extensive visualisation options

- ability to create custom graphs that can combine multiple items into a single view
- network maps
- custom screens and slide shows for a dashboard-style overview
- reports
- high-level (business) view of monitored resources

Historical data storage

- data stored in a database
- configurable history
- built-in housekeeping procedure

Easy configuration

- add monitored devices as hosts
- hosts are picked up for monitoring, once in the database
- apply templates to monitored devices

Use of templates

- grouping checks in templates
- templates can inherit other templates

Network discovery

- automatic discovery of network devices
- agent auto registration
- discovery of file systems, network interfaces and SNMP OIDs

Fast web interface

- a web-based front-end in PHP
- accessible from anywhere
- you can click your way through
- audit log

Zabbix API

- Zabbix API provides programmable interface to Zabbix for mass manipulations, 3rd party software integration and other purposes.

Permissions system

- secure user authentication
- certain users can be limited to certain views

Full featured and easily extensible agent

- deployed on monitoring targets
- can be deployed on both Linux and Windows

Binary daemons

- written in C, for performance and small memory footprint
- easily portable

Ready for complex environments

- remote monitoring made easy by using a Zabbix proxy

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4 Zabbix overview

Architecture

Zabbix consists of several major software components, the responsibilities of which are outlined below.

Server

Zabbix server is the central component to which agents report availability and integrity information and statistics. The server is the central repository in which all configuration, statistical and operational data are stored.

Database storage

All configuration information as well as the data gathered by Zabbix is stored in a database.

Web interface

For an easy access to Zabbix from anywhere and from any platform, the web-based interface is provided. The interface is part of Zabbix server, and usually (but not necessarily) runs on the same physical machine as the one running the server.

Zabbix web interface must run on the same physical machine if SQLite is used.

Proxy

Zabbix proxy can collect performance and availability data on behalf of Zabbix server. A proxy is an optional part of Zabbix deployment; however, it may be very beneficial to distribute the load of a single Zabbix server.

Agent

Zabbix agents are deployed on monitoring targets to actively monitor local resources and applications and report the gathered data to Zabbix server.

Data flow

In addition it is important to take a step back and have a look at the overall data flow within Zabbix. In order to create an item that gathers data you must first create a host. Moving to the other end of the Zabbix spectrum you must first have an item to create a trigger. You must have a trigger to create an action. Thus if you want to receive an alert that your CPU load it too high on *Server X* you must first create a host entry for *Server X* followed by an item for monitoring its CPU, then a trigger which activates if the CPU is too high, followed by an action which sends you an email. While that may seem like a lot of steps, with the use of templating it really isn't. However, due to this design it is possible to create a very flexible setup.

2.0/manual/introduction/overview.txt · Last modified: 2012/02/04 22:31 by richlv
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5 What's new in Zabbix 2.0.0

5.1 Major new features

5.1.1 Low level discovery

Low level discovery documentation

5.1.1.1 Network interface discovery

Network interface discovery support has been added for the following platforms:

- Linux
- Windows
- Solaris
- HP-UX
- AIX

5.1.1.2 Mounted filesystem discovery

Mounted filesystem discovery returns filesystem names along with their types.

Network interface discovery support has been added for the following platforms:

- Linux
- Windows
- Solaris
- HP-UX
- AIX
- FreeBSD
- OpenBSD
- NetBSD
- MacOS X

It is possible to filter by regular expression on the filesystem name or type.

5.1.2 Automatic inventory data collection

Host inventory now can be populated automatically. Items have a property that allows to store their value in any of the inventory fields if inventory is set to *Automatic* mode.

5.1.3 WEB monitoring by Zabbix proxies

WEB scenarios could be monitored by remote proxies. It allows monitoring of WEB applications from various geographical locations.
Also new items "*Last error message of scenario '$1'*" with key *web.test.error[<a scenario name>]* will be added

to all existing scenarios during database upgrade.

5.1.4 Multi-homed host support

Zabbix now supports multiple interfaces per host. You can configure several interface-host pairs in the host properties, and specify which should be used as the default for several item types (Zabbix agent, SNMP and IPMI). Additionally, you can override interface on the item level. When a template is linked to a host that has multiple interfaces defined, default interface for that type used (which currently is the first interface in the list). A single item can only be monitored on a single interface.

Interfaces that are used in any items can not be removed and link *Remove* is greyed out for them.

Together with the ability to use user macros in any of the port fields this should provide a flexible and powerful way to monitor multi-homed hosts.

For SNMP items, port on the item level, if specified, overrides the interface port.

Interface for an item can be selected in item properties. Both in item properties and item mass update form interfaces are grouped by their type.

5.1.5 Direct JMX monitoring support

Ability to monitor JMX without deploying additional software has been introduced in the form of a Java gateway.

5.1.6 Visible host name

Visible host name has been implemented; UTF8 support; new macros ({HOST.HOST}, {HOST.NAME}, {HOST.IP}); {IPADDRESS}, {HOSTNAME} deprecated

5.1.7 SNMP trap monitoring

SNMP trap item documentation.

5.2 Frontend improvements

5.2.1 A new look

Zabbix frontend has received a redesign. The login page, table view, configuration wizard, default trigger severity colours all have a fresh new look.

5.2.2 Reworked frontend

The frontend has been changed to be more user friendly, especially on smaller screens. Many pages that previously required horizontal scrolling now fit in the screen thanks to improved layout and tabbed interface.

The following pages have been redone:

- Host and template properties
    - Host properties now also include host navigation interface, making it easy to jump from host

properties to editing items, triggers, graphs or other entities for that host (screenshots to compare 1.8 vs 2.0)

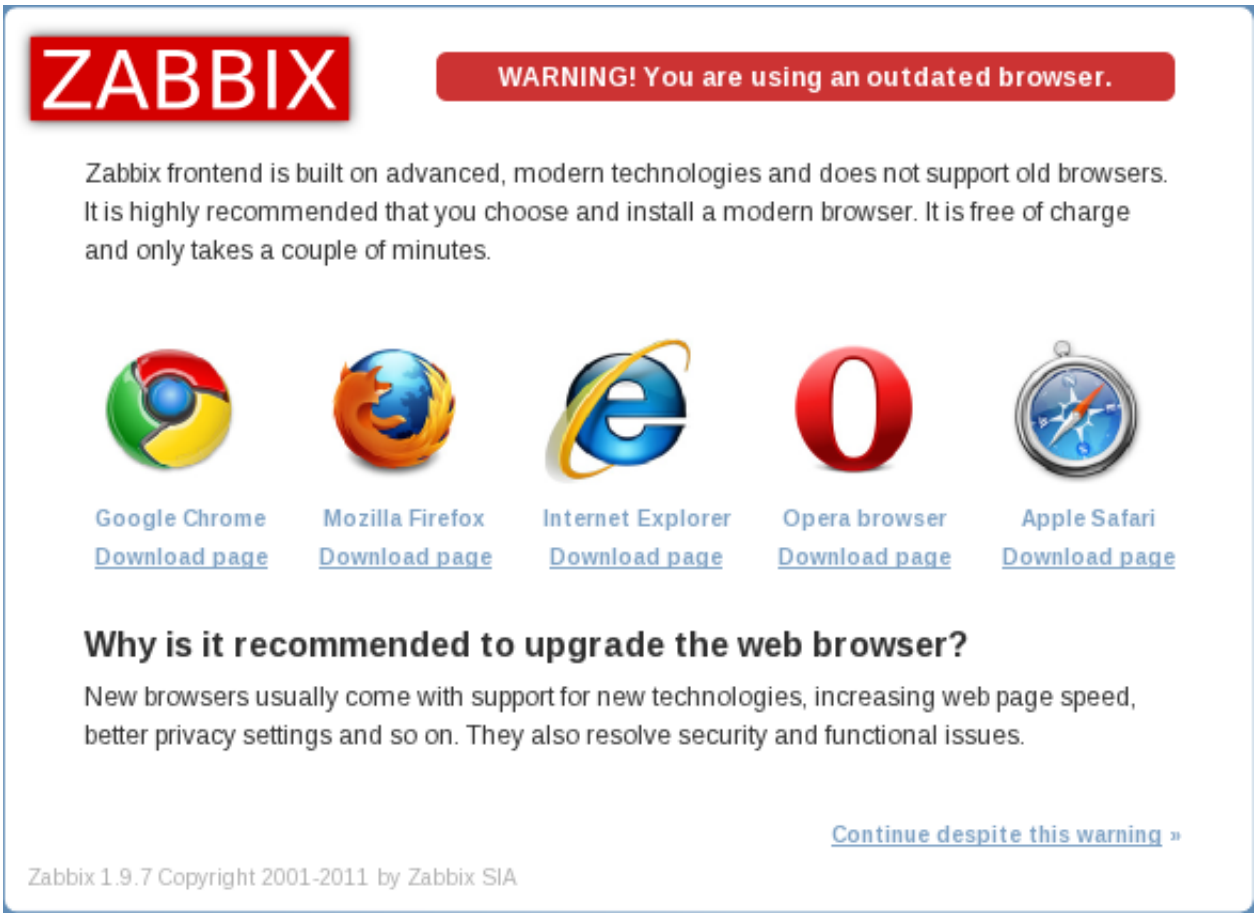
- Proxy properties
- Item properties
- Trigger properties
- Action properties
- Graph properties
    - Graph item reordering now isn't done by repeated clicks on *Up* and *Down* links. Instead, drag'n'drop reordering is possible.

5.2.3 Dropping IE6 support

Support for Microsoft Internet Explorer 6 will not be provided anymore. While we were at that, we also dropped IE7 support.

5.2.3.1 Outdated browser warning

If an outdated browser will be detected by Zabbix frontend, a warning page will be displayed. It will link to download pages for multiple more recent browsers. User would not be blocked from accessing Zabbix frontend, though - that would still be possible via the link in the lower right corner.


ZABBIX
WARNING! You are using an outdated browser.
Zabbix frontend is built on advanced, modern technologies and does not support old browsers.
It is highly recommended that you choose and install a modern browser. It is free of charge
and only takes a couple of minutes.
Google Chrome
Download page
Mozilla Firefox
Download page
Internet Explorer
Download page
Opera browser
Download page
Apple Safari
Download page
Why is it recommended to upgrade the web browser?
New browsers usually come with support for new technologies, increasing web page speed,
better privacy settings and so on. They also resolve security and functional issues.
Continue despite this warning »
Zabbix 1.9.7 Copyright 2001-2011 by Zabbix SIA

5.2.4 SQLite supported by frontend

5.2.5 Improved frontend performance

Multiple sections of frontend have their performance improved, including:

- Dashboard performance has been improved for systems with lots of events.
- Network maps for non-superusers
- Screens for non-superusers
- IT services monitoring and configuration sections
- Availability report

5.2.6 New network map icons

For Zabbix 2.0, a completely new set of network icons is provided, and several new icons have been introduced.

<list of icons>

5.2.7 More intuitive range selecting

Previously, selecting a range of entities in Zabbix frontend was not very intuitive - one had to hold down Ctrl both for the range start and range end. Starting with 2.0, range selection works as in most other software. One just clicks on a checkbox that should start range selection, then, holding down shift, clicks on the checkbox that should be the end for the range. It works the same way for selecting and unselecting (taking the choice from the very first click).

5.2.8 Customisable dashboard

Dashboard elements can now be arranged in a custom layout by dragging and dropping them in the desired location. They can be placed in up to 3 columns.

5.2.9 Translations managed by gettext

Frontend translations are now managed by gettext. This means that standard tools like Pootle [http://translate.sourceforge.net/wiki/pootle/index], Poedit [http://www.poedit.net/] or Virtaal [http://translate.sourceforge.net/wiki/virtaal/index] can be used to translate Zabbix frontend. That should also allow working on smaller sections of the translation and improve collaboration possibilities.

5.2.10 Network map improvements

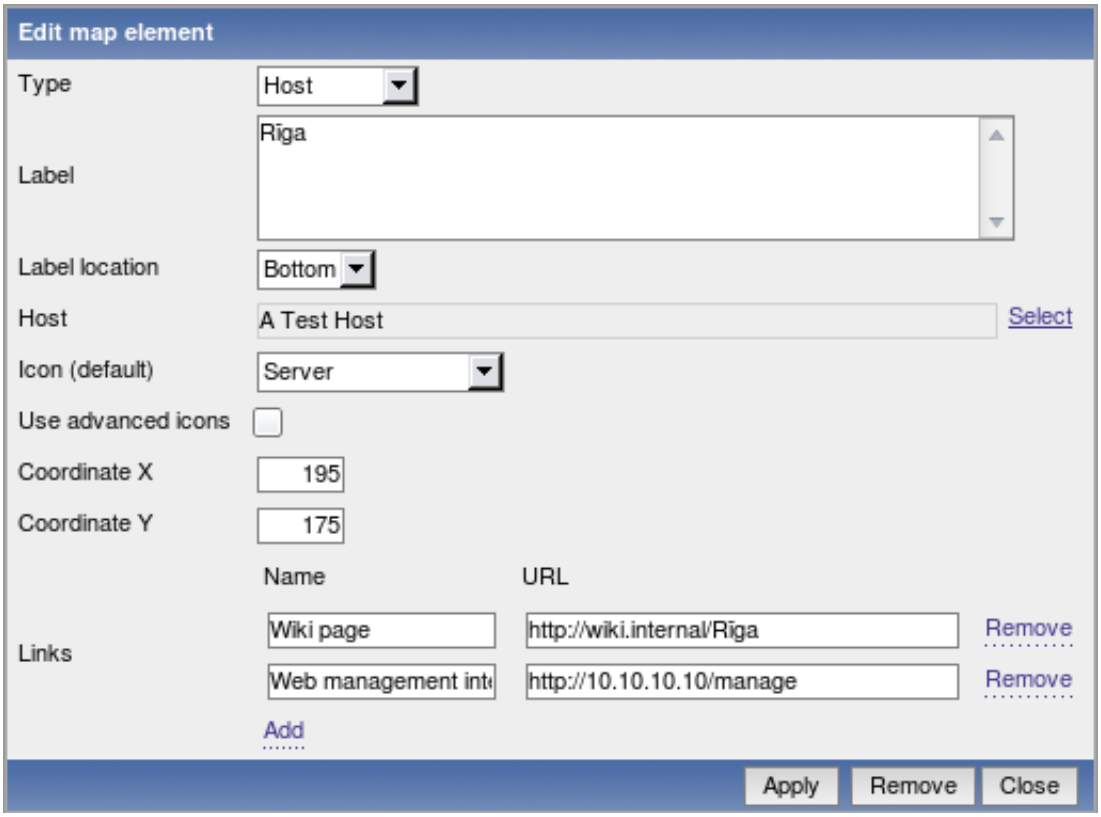
Network maps have received a couple of improvements regarding URL handling.

Multiple URLs for map elements

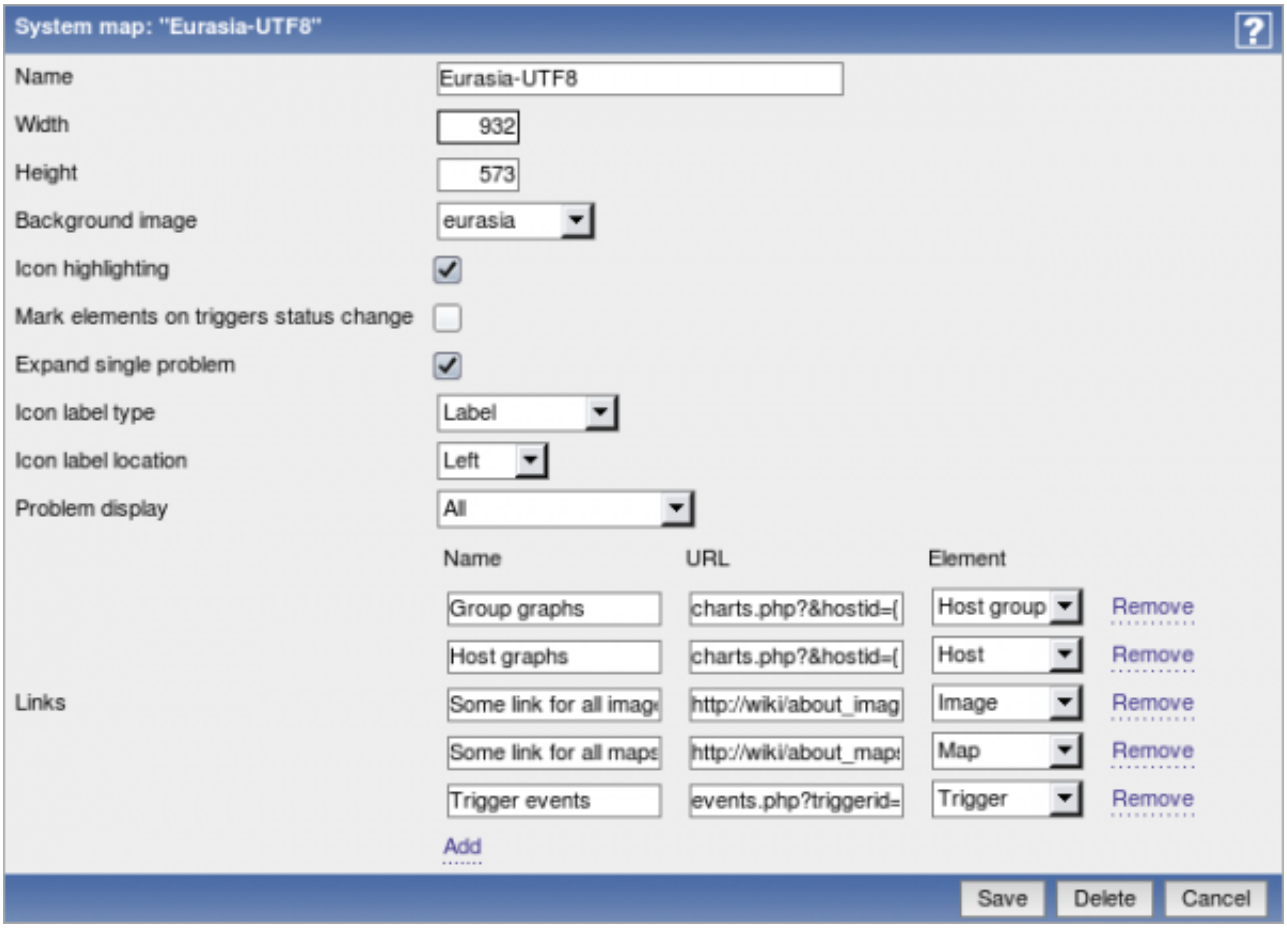
In previous Zabbix versions, it was possible to add single URL for each network map element. Now it is possible to add multiple, while also giving a label for each. This can be done on two levels:

- Map element level
- Map level

For example, here two URLs have been defined on the element (host) level:

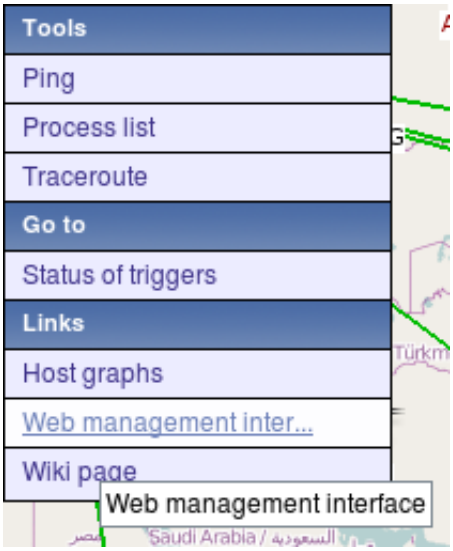


On the map level, URLs can be defined for all element types. Here, URL is defined for each available element type:



Of course, it is also possible to add multiple URLs for the same element type.

When these URLs have been configured, in the monitoring section clicking on a map element will list them (by name) in the popup menu. If the element has it's own URLs and there are map level URLs for its type defined, they will be combined in the same menu:



From the already existing macros, in map URLs macro {TRIGGER.ID} can be used.

Additionally, 3 new macros have been added that also can be used in element URL fields:

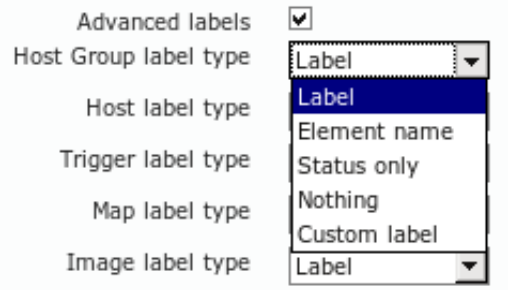
- {HOST.ID}
- {HOSTGROUP.ID}
- {MAP.ID}

Grid selection saving

In previous versions, map grid options like whether to display grid or align to it were discarded after the map configuration form was closed. Starting with 2.0.0, selected grid options are saved for each map individually.

Setting label type per map element type

In previous versions, one could select map label type for all map elements in the map. Starting with 2.0.0, it is possible to enable *Advanced labels* feature per map and choose map element label per element type - image, trigger, host, host group and map.



Displaying hosts from a host group

For host group element, it is now possible to specify that it should display all hosts in a group. In that case, area can be specified where hosts will be placed.

Icon mapping

Automatic icon selection for host type map elements has been added. It utilises values from host inventory fields to select icon for map elements.

Icon maps are configured in *Administration → General →* Icon maps. Each icon map has a unique name, default icon and a list of mappings. Each mapping has a match order, expression for matching (PCRE regular expression or Zabbix expression), icon and reference to an inventory field. Icon map can be assigned to a map in the map configuration form, and overridden on map element level.

When deciding on which icon should be used, regular expression will be matched against specified inventory field. Order in which mappings are tried depends on match order.

Select elements by dragging

You can now drag a rectangle in map configuration view and select all elements in it.

Highlighting selected link

Selected map link now is highlighted in the list of links.

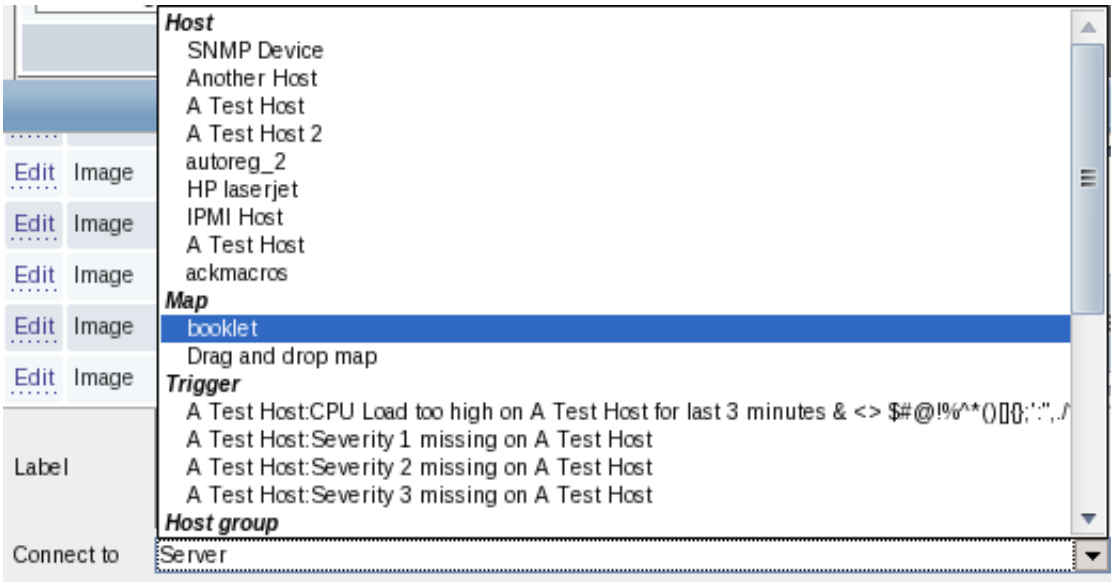
Changed element highlighting

Instead of filled rectangle, to indicate selection elements are now highlighted with a thick rectangular border.

Element properties window changes

Map element properties window has received multiple modifications.

- Links are only shown when one element is selected
- List of selected elements is displayed above properties themselves (was displayed below before)
- When editing multiple elements, properties that are not marked for updating using the checkbox on the left hand side are not editable
- Only one endpoint of a link may be changed when editing a link. Endpoint that is currently selected can not be changed in this view anymore. Additionally, endpoints are sorted by type in the dropdown



5.2.11 Customisable trigger severity names and colours

Trigger severity names and colours can now be easily customised in *Administration → General → Trigger severities*.

5.2.12 Customisable problem displaying

The way triggers are displayed in the frontend can now be customised in *Administration → General → Trigger displaying options*. That includes both OK/PROBLEM and acknowledged/not acknowledged.

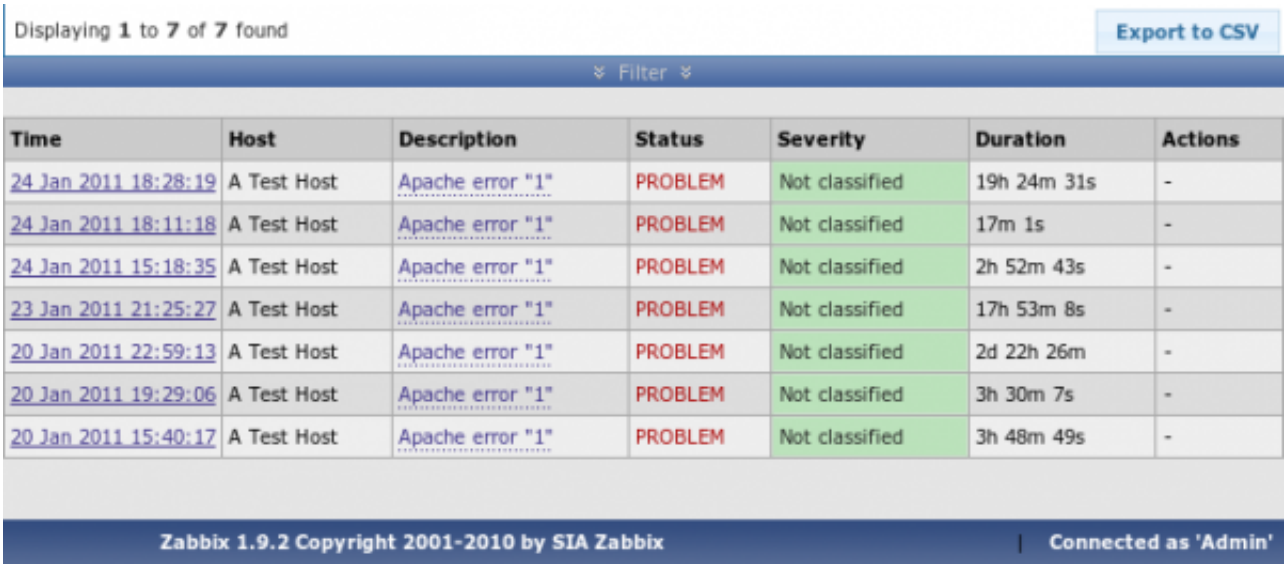
Additionally, time for how long OK triggers are shown after changing state and for how long trigger is blinking after changing state can now be configured in the frontend, instead of modifying include/defines.inc.php file.

5.2.13 Inventory report

Ability to report on hosts by their gathered inventory data has been added to Monitoring → Inventory view.

5.2.14 Event export to CSV

Events from *Monitoring → Events* page can now be exported to a CSV file by using a button in the upper right corner.



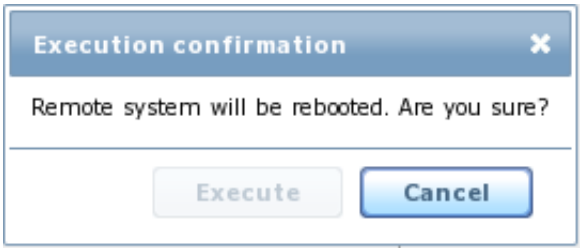
Only currently visible events are exported.

5.2.15 User executable script improvements

Confirmation for user executable scripts

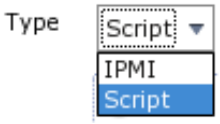
User scripts that can be configured on the frontend in *Administration → Scripts* can now display a confirmation message before being executed. A custom message confirmation message can be entered by the administrator. This feature should be especially useful with potentially dangerous operations (like a reboot script) or ones that might take a long time.

Confirmation can be tested in the configuration form. In that case, *Execute* button is disabled.



Ability to specify script type

Before, if a user script would have to be an IPMI command, it had to follow a syntax of *IPMI <command>*. Starting with Zabbix 2.0, it is an option in the script editing form.



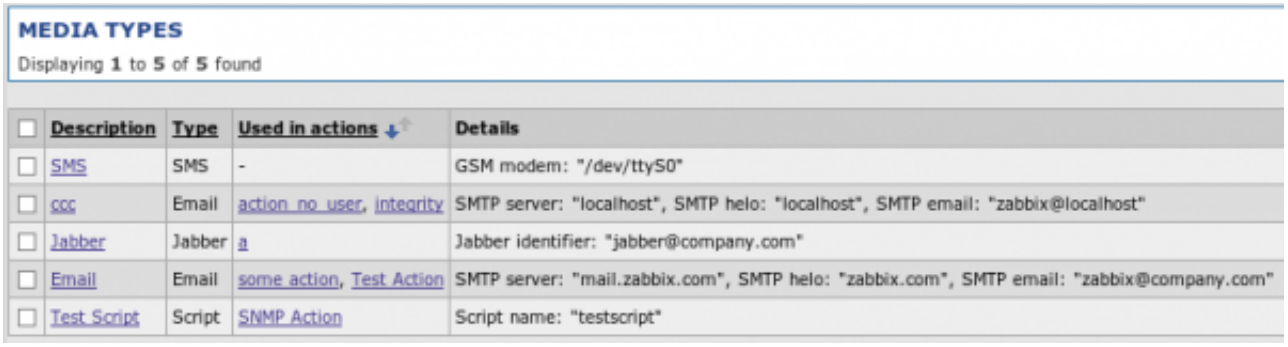
Ability to execute scripts on Zabbix agent

Before Zabbix 2.0, user scripts could be executed on the Zabbix server only. Starting with 2.0, a script can be configured to be executed on the agent instead. For this feature to work, agent must be configured to allow remote commands.

5.2.16 Media type improvements

Displaying of actions that use media types

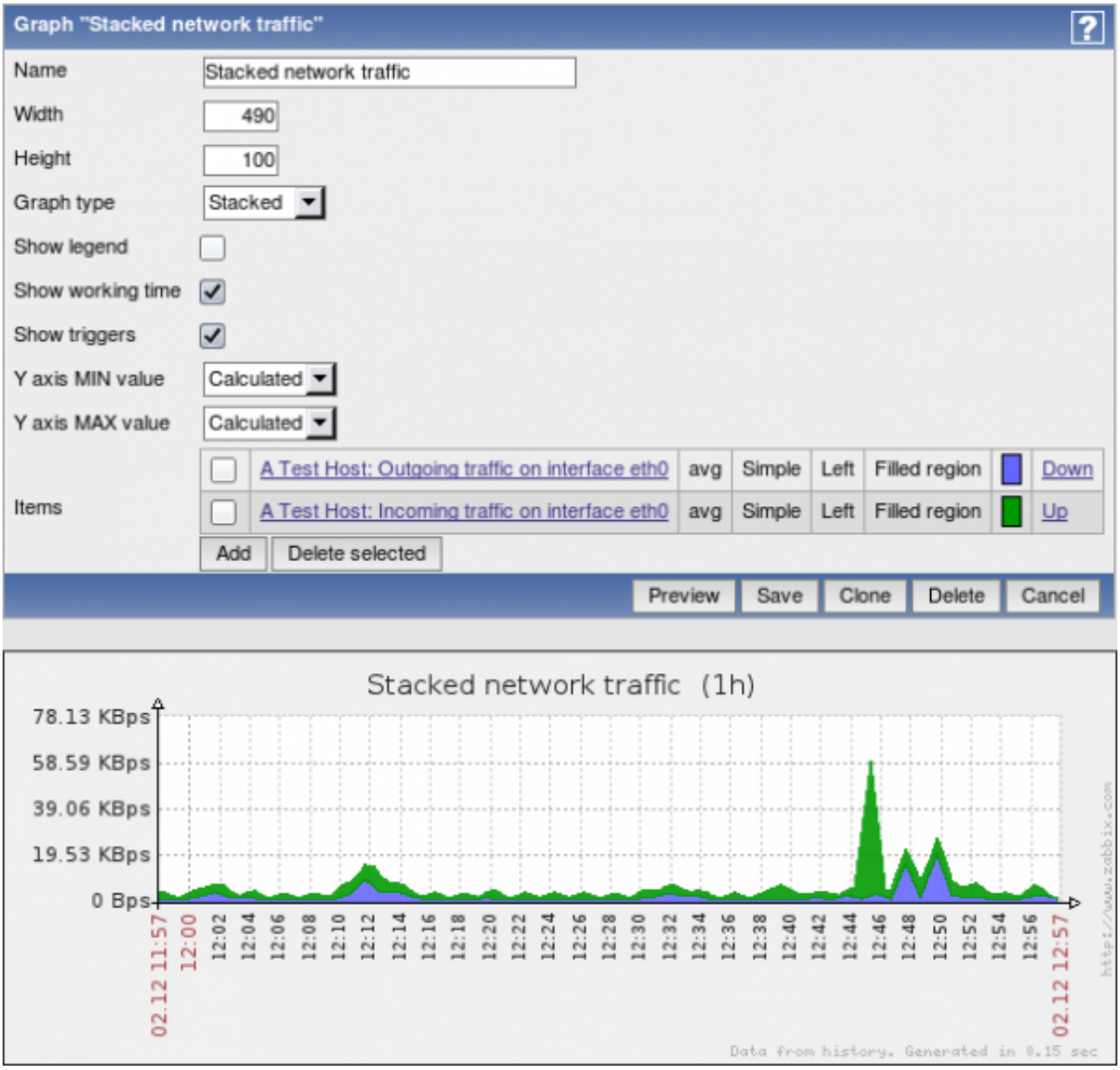
In media type configuration screen it's now possible to view and access actions that directly refer to this media type (it's selected in the *Send only to* dropdown). When sorting by that column, entries are only sorted by whether they are referenced, actions referencing media types do not influence the sort order. It is possible to go directly to action configuration from this page as well.



Enabling and disabling media types

5.2.16.1 Disabling graph legend

For graphs with many items added, legend could grow pretty huge, and there might be other reasons why somebody might want to hide the legend. Starting with Zabbix 2.0.0, that is possible for custom graphs with a simple checkbox:



5.2.17 Improved popup placement

Popups with additional information that appear on mouse roll-over are designed to better fit within smaller screens, such as in mobile devices.

5.2.18 Improved IT services view and configuration

monitoring - shows 80-100% upon mouseover (and a tooltip), reordered sla values, aligned by decimal point, removed graph “show” link (now it's on the bar, link to report is on the service name), expected sla shown in black not green, more...

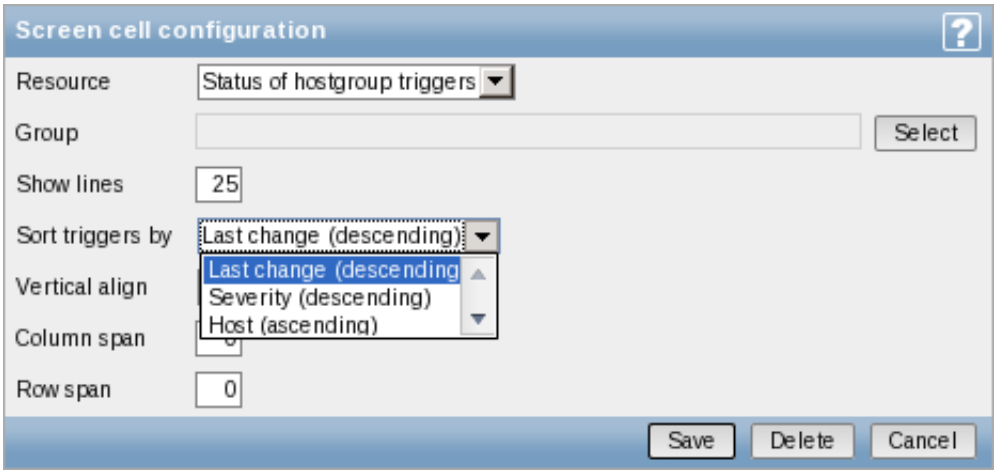
multiple service dependencies can be selected now

5.2.19 Templated host screens

Screens can be defined in templates. They are available for all hosts that are linked to the template. They can be accessed from the host popup menu everywhere, and from the search results.

5.2.20 Ability to sort triggers in screens

Triggers element (by host or by host group) in screens now can be sorted by severity, host or date.



https://support.zabbix.com/browse/ZBXNEXT-746 [https://support.zabbix.com/browse/ZBXNEXT-746]

In the monitoring section, this sorting can only be viewed but not changed. Additionally, in the monitoring section this element shows how many triggers are visible, if not all of them can be shown.

5.2.21 Warning when a too large file is attempted to be uploaded

Previously it was not easy to debug why some upload failed if it exceeded PHP option max_upload_filesize limit. Now Zabbix shows a warning when uploading a too large XML or image file.

5.2.22 Improved configuration wizard

For configuration wizard requirements step, *Recommended* column was removed, as it did not serve any real purpose. Additionally, for failed PHP configuration requirements exact configuration parameters are now listed in the error messages.

Better text, visuals, removed 2nd and 8th steps

5.2.23 Trigger config helper

Trigger configuration helper does not allow setting parameter in seconds for trigger function last() anymore

5.2.24 Improved search results page

In the search results page, individual blocks have been placed below each other. They can also be collapsed and expanded now.

5.2.25 Host popup menu added to more pages

Host popup menu has been added to the *Monitoring → Events*, “Event details”, and *Monitoring → Overview* pages. In *Monitoring → Overview* this menu is available only when hosts are displayed on the left hand side.

5.2.26 New option "Expand macros" for maps configuration screen

In 2.0 macros expanding is turned off by default and new option is introduced for map configuration screen that allows to enable or disable it. Maps that utilize a lot of macros should benefit greatly from turning macro expanding off performance wise.

5.2.27 Improved debug layout

In the frontend debug functionality, SQL query formatting has been improved for better readability.

5.2.28 Allow deleting trigger dependencies during mass update

If no trigger dependencies are added and their controlling checkbox is marked in the trigger mass update, all dependencies for selected triggers will be removed now.

5.2.29 New and updated translations

5.2.29.1 New translations

- Turkish

5.2.29.2 Updated translations

- Czech
- Dutch
- French
- Greek
- German
- Japanese
- Latvian
- Polish
- Ukrainian
- Russian
- Spanish

5.3 New and improved items

5.3.1 Item descriptions added

…and 'description' is now 'name'

Added {ITEM.DESCRIPTION} and {ITEM.KEY} macros.

5.3.2 Improved items

system.localtime key now supports parameters:

- utc (default) - returns Unix timestamp like before;
- local - returns time in the 'yyyy-mm-dd,hh:mm:ss.nn,+hh:mm' format

net.tcp.dns and **net.tcp.dns.query** have been renamed to **net.dns** and **net.dns.record**, respectively. Old syntax still supported as an alias. They are also now supported on Windows.

Additional functionality:

- IP as the first parameter is not ignored anymore, thus it is possible to specify different DNS server than localhost
- Both items gained ability to specify timeout and retry count (not supported on Windows)
- **net.dns** gained support for specifying DNS record type like *A*, *CNAME* and *MX* (**net.dns.record** already supported that). See item documentation for more information

net.tcp.service and **net.tcp.service.perf** now support https and telnet.

system.cpu.util on Solaris was unified with other platforms - *kernel* parameter was changed to *system* and *wait* parameter was changed to *iowait*.

system.cpu.num is now supported for OSX

system.cpu.load now accepts *percpu* as the first parameter - if specified, total load divided by online CPU count is returned (default is still *all* and returns normal load value)

vm.memory.size now supports more modes for various platforms. See supported by platform and vm.memory.size parameters pages for more information.

5.3.2.1 Skipping older data in log monitoring

added optional suppressing of processing of older data in log[], logrt[] and eventlog[]

additional parameter **mode** controls this:

- all (default)
- skip (skipping processing of older data)

5.3.2.2 Simple check format changed

The format of simple checks has been changed. The possibility of using IP addresses in simple checks has been added. The upgrade process converts all existing simple checks.

5.3.2.3 Ability to send empty strings

User parameters, external checks and other item types that return text (character, log, text types of information) now may send an empty string which will be accepted as a valid value. Before this, an empty value returned by an user parameter or external check would be treated as an unsupported item, and ignored for other item types by the Zabbix server.

5.3.2.4 External check parameter changes

External check parameter handling was changed. Previously, only one parameter was accepted. Starting with Zabbix 2.0, the key syntax conforms to other types of items and multiple comma-separated parameters may be passed.

Additionally, the hardcoded first parameter {HOST.CONN} for external checks has been removed and now external check parameters may be fully customised. Upgrade process adds this macro as a first parameter to all existing external checks.

5.3.2.5 Multi-line value support for external checks

Multi-line values can now be stored for the output of external scripts.

5.3.2.6 Time postfix support in aggregate items

Aggregate items now support time postfixes.

5.3.3 New items

- **vfs.file.contents[]** allows to retrieve full file contents with each check (limited to 64KB, will turn unsupported if file is bigger)

Items that are especially useful for automated inventory data collection:

- system.hw.chassis[full|type|vendor|model|serial] - default is [full], root permissions needed
- system.hw.cpu[all|cpunum,full|maxfreq|vendor|model|curfreq] - default is [all,full]
- system.hw.devices[pci|usb] - default is [pci]
- system.hw.macaddr[interface,short|full] - default is [all,full], interface is regex
- system.sw.arch
- system.sw.os[name|short|full] - default is [name]
- system.sw.packages[package,manager,short|full] - default is [all,all,full], package is regex

A **status** item has been removed as it was not easy to use and understand. Instead, a new internal item - **zabbix[host,<type>,available]** has been added. It allows to properly monitor host availability by each of states - Zabbix agent, SNMP, IPMI, JMX - and returns values for available, unavailable and unknown. The database upgrade process **doesn't convert** all existing 'status' keys and associated triggers to the new syntax, so they have to be converted manually.

5.4 Daemon performance improvements

5.4.1 Improved housekeeper performance on PostgreSQL

5.4.2 Caching of general configuration

Multiple general configuration parameters that previously were only read upon server startup are now also stored in the configuration cache. They are updated together with common configuration cache update.

- *Refresh unsupported items*

- *Discovery group*
- Custom severity names
- For how long alerts are stored
- For how long events are stored

Refresh unsupported items is now also synchronised to the Zabbix proxy.

5.4.3 Trigger cache

Trigger cache has been introduced. Currently it holds the following information about triggers:

- description
- expression
- error
- severity
- type
- value
- value_flags

Trigger cache is part of the configuration cache and is updated the same way and at the same time as other parts of it. Note that upgrading to 2.0.0 may increase configuration cache usage, especially if Zabbix instance has lots of triggers.

This should improve trigger related operation performance and reduce the load on the database.

5.4.4 User macro caching improvements

In Zabbix 1.8, individual daemon processes (for example, pollers) cache user macros and update this information every 5 minutes. In Zabbix 2.0, user macros are included in the general configuration cache and updated every **CacheUpdateFrequency** seconds.

5.4.5 Improved history (DB) syncer and escalator performance

The amount of work history syncer and escalator processes have to do for escalations has been reduced, which resulted in improved performance when processing large amount of events.

5.5 Other improvements

5.5.1 Nanosecond support

5.5.2 Database integrity

5.5.2.1 Database creation

Order of database file import has been changed - images must be imported before **data.sql** now.

5.5.3 Improved active agent auto-registration

Active agent auto-registration now supports monitoring added hosts with passive checks. When active agent asks for checks, if it has configuration parameters ListenIP or ListenPort defined in the configuration file, these are sent along to the server. If multiple IP addresses are specified, the first one is sent to the server.

Server, when adding a new auto-registered host, uses received IP address and port to configure the agent. If no port value is received, 10050 is used. If no IP address value is received, the one used for incoming connection is used.

For active agent auto-registration notifications there are also two new macros supported:

- `{HOST.IP}` (or its deprecated version `{IPADDRESS}`)
- `{HOST.PORT}`

5.5.4 Automatic filling of DNS names

For network discovery and active agent autoregistration, host DNS entry is now populated by doing a reverse lookup from Zabbix server or Zabbix proxy, if discovery is performed by a proxy.

5.5.5 Event redesign

The way Zabbix handles unknown events has been redesigned. Before, in *Monitoring → Events* section, if event flow was OK → UNKNOWN → OK, hiding unknown events would display two successive OK events. Starting with 2.0.0, only the oldest OK event would be display in such a case. An exception is triggers with "Multiple PROBLEM events" - for these, multiple successive events would be always shown.

(should document how acknowledges work from server & frontend side)

Trigger status UNKNOWN has been removed - triggers will always be in OK or PROBLEM state, although they might get additional unknown status. This status will only be used for informational purposes.

5.5.6 Supported macro changes

5.5.6.1 Common macros

In interface IP and DNS fields the following macros are supported:

- {HOST.HOST} (or its deprecated version {HOSTNAME})
- {HOST.NAME}
- {HOST.CONN}
- {HOST.DNS}
- {HOST.IP} (or its deprecated version {IPADDRESS})

In trigger names, additional following macros are supported:

- {HOST.HOST} (or its deprecated version {HOSTNAME})
- {HOST.NAME}
- {HOST.CONN}
- {HOST.DNS}
- {HOST.IP} (or its deprecated version {IPADDRESS})

5.5.6.2 User macro support

For 2.0, user macros can now be used in these additional locations:

- Hosts:
  - Interface IP/DNS
  - Interface port
- Passive proxy
  - Interface port
- Items
  - SNMPv3 security name
  - SNMPv3 auth pass
  - SNMPv3 priv pass
  - SNMPv1/v2 community
  - SNMPv1/v2 OID
  - DB monitor additional parameters
  - SSH username
  - SSH public key
  - SSH private key
  - SSH password
  - SSH script
  - Telnet username
  - Telnet password
  - Telnet script
  - Calculated item expression
- Discovery
- SNMPv3 security name
- SNMPv3 auth pass
- SNMPv3 priv pass
- SNMPv1/v2 community
- SNMPv1/v2 OID

Additionally, macro **{TRIGGER.KEY<1-9>}** has been renamed to **{ITEM.KEY<1-9>}**.

5.5.7 Boolean item type

New item type has been added - boolean. It translates textual representation into either 0 or 1. All values are matched in a case-insensitive way. **TRUE** is stored as **1** and **FALSE** is stored as **0**. Currently recognised values are:

TRUE	FALSE
true	false
t	f

yes	no
y	n
up	down
running	unused
enabled	disabled
available	unavailable

Additionally, any non-zero numeric value is considered to be **TRUE** and zero is considered to be **FALSE**.

5.5.8 API access changes

User group access property “API access” has been removed. Starting with Zabbix 2.0, all users have full access to the API.

5.5.9 Unified time format

In previous versions of Zabbix, specifying time till midnight differed depending on the location - in some locations it was “23:59”, in others - “24:00”. Starting with Zabbix 2.0 this has been unified so midnight is always specified as “24:00”.

5.5.10 "Host profiles" renamed to "host inventory" and merged

Before, Zabbix hosts had “normal” and “extended” profile. In Zabbix 2.0 both profiles were merged into single “host inventory”.

5.5.11 Escalations enabled by default

Starting with Zabbix 2.0, escalations are always enabled and can not be disabled. By default a condition “Trigger value = PROBLEM” is added to new actions, so only problem notifications are sent. This makes recovery message checkbox operate in a more intuitive way. This action condition can be removed by the user.

5.5.12 Remote command improvements

Specify IPMI as a type instead of obscure syntax

Execute custom global scripts

Execute SSH and telnet commands

For custom scripts, ability to execute on the Zabbix server or agent was added

5.5.13 Changed default locations

5.5.13.1 Configuration files location

Before 2.0 this was hard-coded to /etc/zabbix . Since 2.0 the default changed to /usr/local/etc and depends on compile-time installation variable *sysconfdir* (which was ignored before Zabbix 2.0).

5.5.13.2 External scripts location

Before 2.0 the default location for external scripts was /etc/zabbix/externalscripts . Since 2.0 this changed to /usr/local/share/zabbix/externalscripts and depends on compile-time installation variable *datadir*. This location can be changed using configuration parameter ExternalScripts (server and proxy).

5.5.13.3 Alert scripts location

Before 2.0 the default location for alert scripts that are used for actions was /home/zabbix/bin . Since 2.0 this changed to /usr/local/share/zabbix/alertscripts and depends on compile-time installation variable *datadir*. This location can be changed using configuration parameter AlertScriptsPath (server).

5.5.14 Configuration files and directories added during installation

If you are using a packaged version of Zabbix the following information can be irrelevant because the locations might depend on a distribution policy.

When installing Zabbix the following configuration files are created if missing:

- /usr/local/etc/zabbix_server.conf
- /usr/local/etc/zabbix_proxy.conf
- /usr/local/etc/zabbix_agent.conf
- /usr/local/etc/zabbix_agentd.conf

/usr/local/etc is default value of compile-time installation variable *sysconfdir*.

The following directories are created for includes:

- /usr/local/etc/zabbix_server.conf.d
- /usr/local/etc/zabbix_proxy.conf.d
- /usr/local/etc/zabbix_agent.conf.d
- /usr/local/etc/zabbix_agentd.conf.d

These directories are not automatically handled as “Include” directories, you would have to set them in appropriate configuration file.

The following directory is created when installing server or proxy:

- /usr/local/share/zabbix/externalscripts

The following directory is created when installing server:

- /usr/local/share/zabbix/alertscripts

/usr/local/share is default value of compile-time installation variable *datadir*.

5.5.15 Unsupported item information sent by proxies

Information about unsupported items is now passed from Zabbix proxies to the server.

5.5.16 Simplified ServerActive logic

Zabbix agent daemon parameter **ServerActive** has been simplified. Instead of overriding **Server** parameter,

ServerActive now is the only parameter that's used for active checks. Additionally, **ServerPort** parameter has been removed - host ports now should be specified in the **ServerActive** parameter.

See the "See also" section at the bottom of this page to read more details about these changes.

5.5.17 Simplified Zabbix agent daemon configuration

Zabbix agent daemon configuration has been simplified by removing **DisableActive** and **DisablePassive** parameters. Instead, not specifying **ServerActive** will not do any active item processing, and specifying **StartAgents**=0 will disable processing of incoming connections for passive items.

5.5.18 Monitoring of files larger than 2GB

While Zabbix did offer monitoring of files larger than 2GB before, this support was not consistent - it varied by platform and by item. Since 2.0, support for files exceeding 2GB is available also on 32-bit systems in all components, including tasks like logfile monitoring, file size monitoring etc. See large file support section for more information.

See also

1. Differences in the Zabbix agent configuration for active and passive checks starting from version 2.0.0 [http://blog.zabbix.com/multiple-servers-for-active-agent-sure]

2.0/manual/introduction/whatsnew200.txt · Last modified: 2013/09/26 10:48 by asaveljevs
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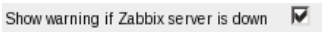
6 What's new in Zabbix 2.0.1

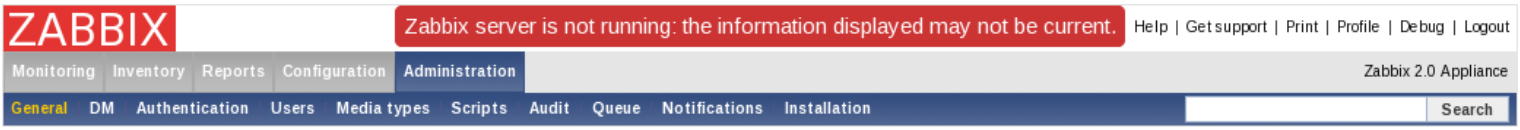
6.1 Frontend improvements

6.1.1 Warning message about server being down

A warning message will be shown in the frontend if Zabbix server is not reachable (for example, not running). This message can be configured on the Zabbix installation level in *Administration → General → GUI*.



When server has been detected to be down, a message will be displayed at the top of the browser window. This message will be visible even if user has scrolled down in the page.

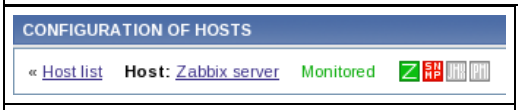

ZABBIX
Zabbix server is not running: the information displayed may not be current.
Help | Get support | Print | Profile | Debug | Logout
Monitoring Inventory Reports Configuration Administration
Zabbix 2.0 Appliance
General DM Authentication Users Media types Scripts Audit Queue Notifications Installation
Search

If mouse cursor is moved over the message, it is hidden to reveal contents below.

6.1.2 Improved availability displaying in host properties

Displaying of host availability in host properties was improved. Instead of single word describing only agent availability, 4 icons were added, same as in the list of hosts. Added bonus is that they now take less space than previous textual representation.

Availability in host properties before 2.0.1



Availability in host properties since 2.0.1

6.1.3 Miscellaneous frontend improvements

Action properties (conditions and operations) have been updated to use direct *Remove* links instead of checkboxes and buttons.

XML import now accepts all valid empty tags in all locations, previously it required specific empty tag syntax depending on the location. Since 2.0.1 both *<tag></tag>* and *<tag/>* may be used.

6.1.4 Updated translations

- Brazilian Portuguese
- French
- Greek
- Japanese
- Ukrainian
- Russian

6.2 Daemon improvements

- Zabbix Windows agent previously included the trailing backslash in disk drive discovery - for example, the returned values would include **C:**. Since 2.0.1, the returned values have the trailing backslash stripped (for example, **C:**). This allows to use these values in Windows performance counters as well.
- Previously, on FreeBSD a monitored disk device had to be specified without */dev* prefix. Now the prefix may be optionally used.
- Previously, Zabbix agents were limited to monitoring 8 disks or partitions on a system. This limit has been increased to 1024 now. Note that monitoring a large amount of disks will increase the memory usage.
- Previously, Zabbix agents allocated a static amount of memory for monitoring 8 disks or partitions. This amount is now dynamic and is allocated only if monitoring of a specific disk or a partition is requested, thus reducing the memory usage on systems where less than 8 disks are being monitored. If no disks are being monitored, Zabbix agent memory usage will decrease by approximately 400 KB. Memory is allocated incrementally as more disk monitoring is being requested. The steps for this increase and approximate memory usage (for disk monitoring only, in MB) are as follows:

Disks	0	1	2	3	4	8	16	32	64	128	256	512	768	1024
Memory	0	0.05	0.1	0.15	0.2	0.4	0.8	1.5	3.1	6.2	12.4	24.8	37.2	49.6

2.0/manual/introduction/whatsnew201.txt · Last modified: 2012/11/23 17:22 by martins-v

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7 What's new in Zabbix 2.0.2

7.1 Frontend improvements

- Filters in host, host inventory and audit pages were improved to fit in screens, less than 1024 pixels wide
- Performance in graph related pages was improved
- Performance in the dashboard's "Host status" widget was improved, especially on setups with many groups
- Global messages previously appeared in all pages, including popups (for example, for item or host selection). Now they will only appear in pages that would also display the main menu
- Frontend will now validate time periods entered in item flexible intervals, working time definition and other locations
- More XML import status messages can now be translated
- More specific reasons will be given when template linking fails in some cases
- Item value macros in map labels now support multiplier suffixes (for example, "{host:item.function(5m)}")
- In the global search results, host and template configuration links for host group results are now separated. Previously, only link to host editing would be displayed, and no indication of how many hosts are there would be visible. Since 2.0.2, configuration section of search results has been expanded with templates entry, and both host and template columns have object count as well. This is also more consistent with other blocks in the global search results

Before 2.0.2

Host groups

Host group	Latest data	Triggers	Events	Edit hosts
Zabbix servers	Latest data	Triggers	Events	Edit hosts

Displaying 1 of 1 found

Since 2.0.2

Host groups

Host group	Latest data	Triggers	Events	Hosts	Templates
Zabbix servers	Latest data	Triggers	Events	Hosts (2)	Templates (0)

Displaying 1 of 1 found

- *Change* in *Monitoring → Latest data* for **unixtime** units has been improved. Instead of interpreting change using the same unit as for the item, it will now use **uptime** unit

Before 2.0.2

Last value	Change
2012.07.04 14:12:56	+1970.01.01 03:00:30

Since 2.0.2

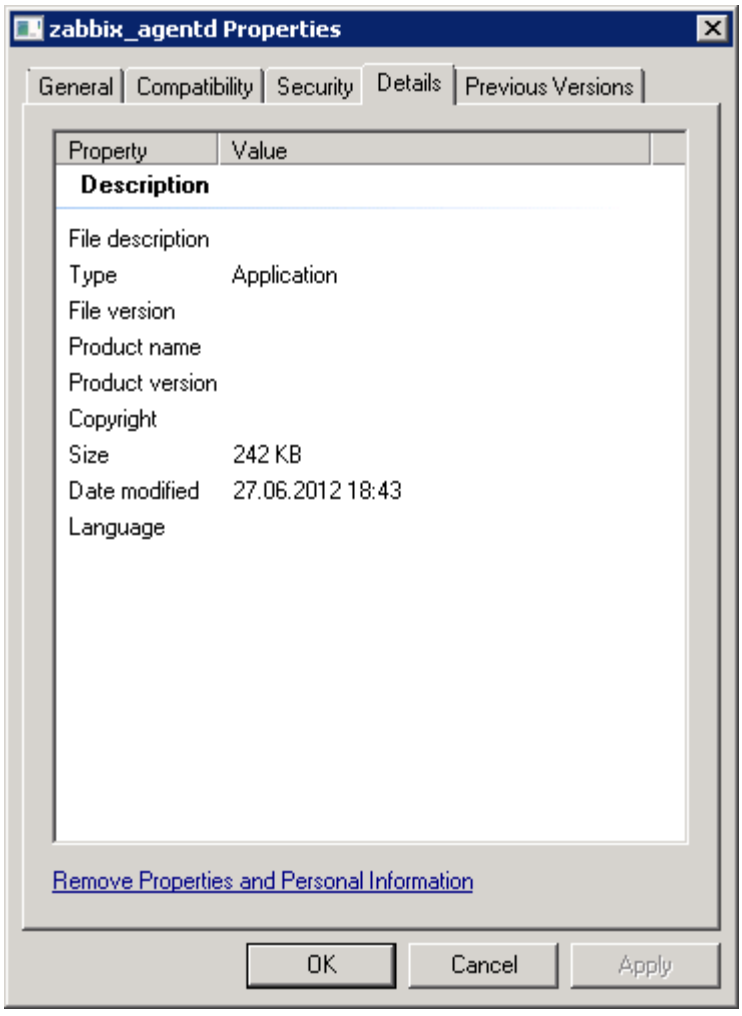
Last value	Change
2012.07.04 14:13:56	+00:00:30

7.1.1 Updated translations

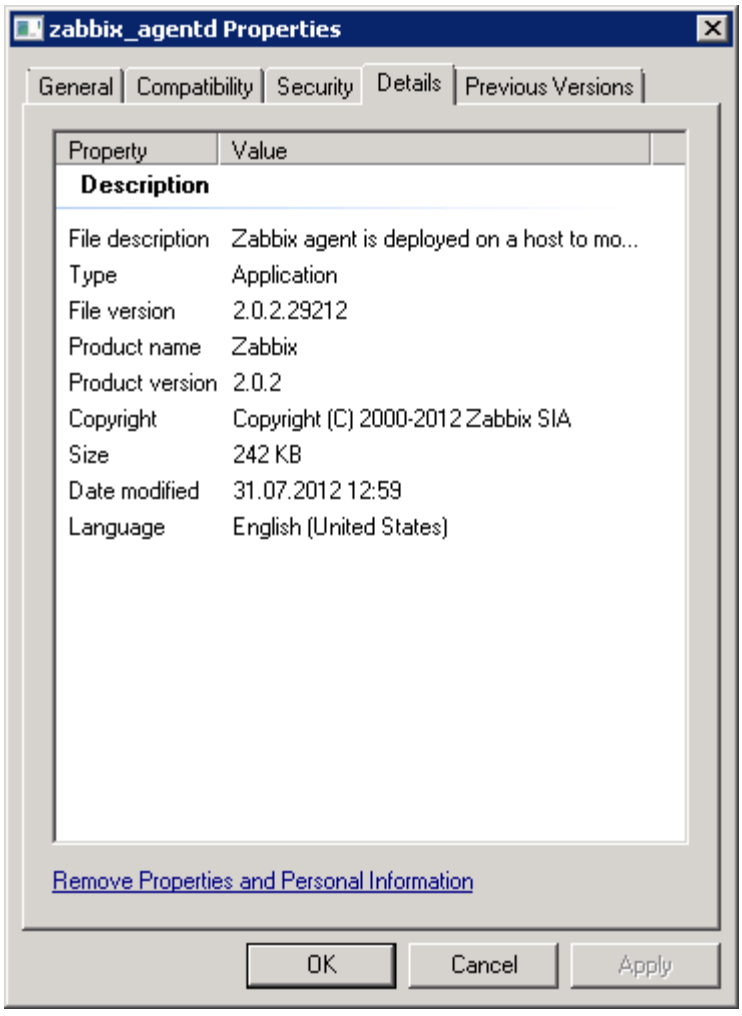
- French
- German
- Japanese
- Russian

7.2 Daemon improvements

- Previously, HOST.CONN, HOST.IP and HOST.DNS macros only resolved to the main agent interface. This was not convenient for devices that only had SNMP interface. Since 2.0.2 these macros will use the main agent interface, however, if it is not present, main SNMP interface will be used. If SNMP is also not present, main JMX interface will be used. If JMX is not present either, main IPMI interface will be used.
- Windows agent binaries will now include version information resource. For example, on Windows 2008 the improvement will look like this:



File information in 2.0.1



File information in 2.0.2

7.3 Miscellaneous improvements

- Zabbix sender manpage now explains which parameters are supported from the agent configuration file
- Item reference for frontend now includes all items and its syntax matches the syntax used in the manual

2.0/manual/introduction/whatsnew202.txt · Last modified: 2012/11/23 17:23 by martins-v
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8 What's new in Zabbix 2.0.3

8.1 Frontend improvements

8.1.1 Flicker-free screens

Previously an automatic page refresh or change in the timeline scrollbar in the monitoring section reloaded the whole page. This was especially visible in screens, where it may take some time for all screen elements to load properly, and the result often was a page where elements jumped around for a while.

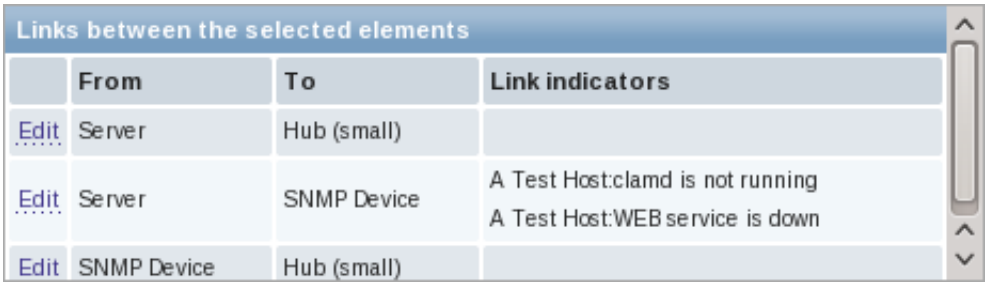
Since Zabbix 2.0.3, screens in monitoring do not refresh the whole page, but all the individual elements are reloaded in the background and replaced.

Additionally, image background reloading was implemented in *Latest data*, graphs and slideshows. This should result in a better user experience and reduced network traffic for all of these pages.

8.1.2 Displaying of multiple map links

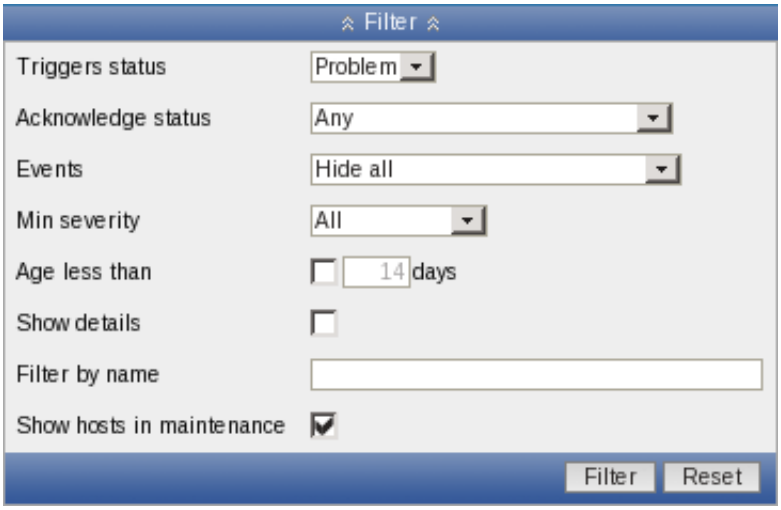
In previous 2.0 versions, map links were not available for editing when multiple elements were selected. Since 2.0.3, it is possible as follows:

- If a single map element is selected, all links that are connected to it are listed
- When multiple map elements are selected, links that connect any two of them are listed



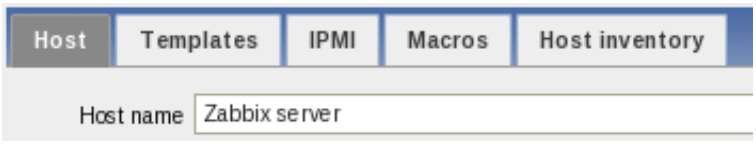
8.1.3 Filtering triggers by maintenance status

It is possible to filter *Monitoring → Triggers* page by maintenance status now.



8.1.4 Improved classic theme tab colours

Previously, classic theme tab colours were slightly confusing. The active tab had grey background, which made it look inactive, while other tabs had light background. This was changed so that the active tab now has a light background, while the inactive ones - blue. Active tab also lost the lower border, so that it indeed looks like one with the visible tab.

	Host properties before 2.0.3
	Host properties since 2.0.3

Previous theming was even more confusing when there were two tabs only, and it was not that clear which is the active one.

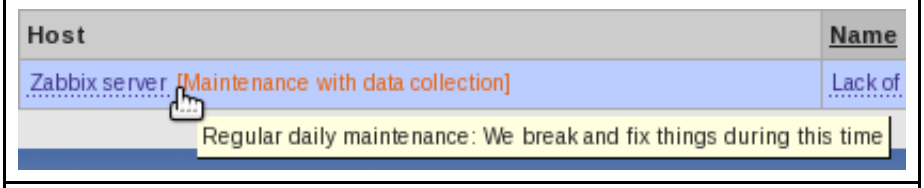
	Web scenario properties before 2.0.3
	Web scenario properties since 2.0.3

8.1.5 Maintenance indicated by an icon

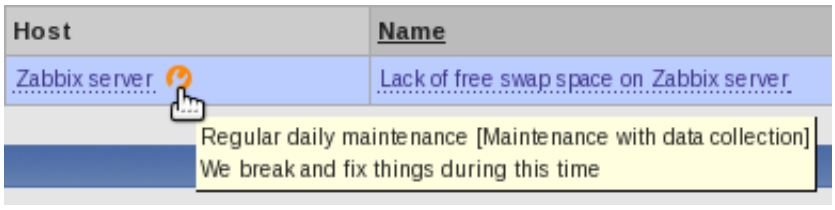
Previously, maintenance being active was indicated:

- in *Monitoring → Triggers* - with a string, printed next to the host
- in *Monitoring → Dashboard* - by colouring host name in orange

In the triggers page this was increasing the cell width considerably, and in the dashboard it did not allow to nicely provide access both to host context menu and maintenance details. This was changed in both locations to use a new icon - orange, round background with white wrench on it.


Host
Name
Zabbix server [Maintenance with data collection]
Lack of
Regular daily maintenance: We break and fix things during this time

Previous way of displaying maintenance status


Host
Name
Zabbix server
Lack of free swap space on Zabbix server
Regular daily maintenance [Maintenance with data collection]
We break and fix things during this time

New way of displaying maintenance status

8.1.6 Miscellaneous frontend improvements

- In item mass update, field length limits have been extended.
- In availability report, dropdown labels have been renamed from *Template* and *Template group* to *Host* and *Host group*
- Map links in the editor will now be sorted first by *From*, then by *To* element. If a single element is selected, it will be used as *From* for all links. If multiple elements are selected, for each link the element with the lower **selementid** will be used for *From*.
- Performance for the screen, host screen and graph sections was improved.

8.1.7 New translations

- American English
- Chinese (Taiwan)

8.1.8 Updated translations

- Brazilian Portuguese
- Chinese (China)
- French
- German
- Japanese
- Latvian
- Spanish
- Russian
- Ukrainian

8.2 API improvements

- **trigger.get** and **triggerprototype.get** methods have a new parameter **expandExpression**
- maintenance.get method has a new parameter **selectTimeperiods**

8.3 Daemon improvements

- Notification macro **{ESC.HISTORY}** will include remote commands now
- Suffixes “KMGTsmhdw” are now supported in the second parameter of count() trigger function
- Previously it was possible to send large amount of data to the Zabbix server, potentially exhausting memory. This is now limited to accept only 128MB when using Zabbix protocol. Any other data (including older Zabbix protocols) stays limited at 16MB
- Zabbix server and proxy will now retry connections to MySQL if connecting to a DNS name and resolution fails
- When encoding email subject from UTF-8 to Base64, lines longer than 75 bytes will be split up to conform with RFC-2047

8.4 Miscellaneous improvements

Database patch performance for upgrading 1.8 to 2.0 was significantly improved, especially for systems with lots of events.

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9 What's new in Zabbix 2.0.4

9.1 Frontend improvements

9.1.1 Shading of screen elements that failed to update

Since 2.0.3, screen elements are updated in background, without reloading the whole page. Zabbix 2.0.4 will darken elements that have failed to update for some reason.

9.1.2 Miscellaneous frontend improvements

- Full cloning a template will now clone templated screens as well.
- It is now possible to have empty recovery message body.
- Previously, if a trigger had no events, it was shown as acknowledged in *Monitoring → Triggers*. Now a string **No events** will be shown instead.
- Page refresh should now reload less files, thus improving overall frontend performance and decreasing the network traffic.
- In network maps, **HOST.HOST** macro will now work in trigger elements.
- Screen editing will not allow to set row or column span that would exceed row or column count.
- In *Monitoring → Overview* vertically displayed text that used to be made up by images, now is actually vertical text.

9.1.3 New translations

- Finnish
- Indonesian
- Persian

9.1.4 Updated translations

- Brazilian Portuguese
- Chinese (China)
- Chinese (Taiwan)
- Czech
- French
- German
- Hungarian
- Italian
- Japanese
- Latvian
- Polish
- Slovak

- Russian
- Ukrainian

9.2 API improvements

Method **templatescreen.copy** has been added.

9.3 Daemon improvements

Macro **{TRIGGER.COMMENT}** has been renamed to **{TRIGGER.DESCRIPTION}**, to match the field name. Old macro is still supported.

Default disks checked have been improved for vfs.dev.read and vfs.dev.write items when using Zabbix agent daemon with -t or -p flags. On Linux, FreeBSD, OpenBSD and Solaris disks that have higher probability of existing will be used.

Macros **{HOST.HOST}**, **{HOST.NAME}**, **{HOST.IP}**, **{HOST.DNS}** and **{HOST.CONN}** are now supported in the parameters field for SSH, telnet and DB monitor items.

9.3.1 Improved SNMPv3 failure handling

Previously, Zabbix server and proxy would handle all SNMPv3 querying failures as a failure of the whole host. Since 2.0.4, if SNMPv3 *security name* or *security auth passphrase* are wrong, this will be detected and such items will turn unsupported. Item information will be updated with a proper error message, which will be visible in the item configuration list.

9.3.2 Java gateway improvements

Zabbix Java gateway now supports dots in attribute name. To use such an attribute name, dots must be escaped with backslashes.

2.0/manual/introduction/whatsnew204.txt · Last modified: 2013/05/03 15:13 by martins-v
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10 What's new in Zabbix 2.0.5

10.1 Frontend improvements

- Frontend overall performance was improved by optimising performance checks
- SQL query count was reduced and performance improved in *IT services* and most pages that access trigger information
- Graphs in web monitoring will use new flicker-free refresh method now
- Error messages for screen row and column span validation were improved
- Reduced the amount of persistent connections and to Oracle backend and changed to suggested Oracle access functions

10.1.1 New translations

- Bulgarian

10.1.2 Completed translations

The following translations are 100% completed for this release:

- American English
- Brazilian Portuguese
- French
- German
- Greek
- Japanese
- Portuguese (Portugal)
- Russian
- Ukrainian

10.1.3 Updated translations

- American English
- Brazilian Portuguese
- Dutch
- Finnish
- French
- German
- Greek
- Hungarian
- Japanese
- Latvian

- Polish
- Portuguese (Portugal)
- Russian
- Slovak
- Spanish
- Swedish
- Turkish
- Ukrainian

10.2 Daemon improvements

- Source IP setting for SNMP checks was not supported with all Net-SNMP versions. Since Zabbix 2.0.5 this setting should work in all cases.
- Performance for Oracle as the Zabbix backend database was improved by prefetching 2MB of data in SELECT statements.
- Zabbix Windows agent now supports Windows 8 and Windows Server 2012 in the **system.uname** item.
- Zabbix Windows agent now supports non-ASCII interface names on Windows Vista/Server 2008 and later.
- User macros and global regular expressions now are supported in SNMP trap item key parameters.
- Zabbix agent user parameter output previously was limited to 64KB. It can now return up to 512KB of data. Additionally, peak memory usage of agent in cases when the output size is smaller may be reduced by up to 60KB.

10.2.1 Improved SNMP performance

- Performance of the SNMP normalize function was improved.
- Previously, each dynamic index was obtained individually when requested. On systems with thousands of dynamic indexes Zabbix pollers were 100% busy for more than 10 minutes until the cache was built up. Now the first dynamic index request will cause all indexes in the same SNMP table to be looked up and processed in one go. This greatly speeds up the cache building and reduces the SNMP query count. Note that all entries are looked up even if only some would be used later.

10.2.2 Increased cache size limits

The limit for Zabbix server and proxy configuration parameters *CacheSize*, *HistoryCacheSize* and *HistoryTextCacheSize*, as well as server parameter *TrendCacheSize*, was increased from 1GB to 2GB.

10.3 Miscellaneous improvements

Zabbix sender now supports *ServerActive* parameter from the agent daemon configuration file. The first IP address is used.

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11 What's new in Zabbix 2.0.6

11.1 New notification macros

- Macros **{TRIGGER.TEMPLATE.NAME}** and **{TRIGGER.HOSTGROUP.NAME}** will return the list of templates and host groups, respectively, in which the trigger is defined.
- Macros **{TRIGGER.NAME.ORIG}**, **{ITEM.NAME.ORIG}** and **{ITEM.KEY.ORIG}** will return the original name/key with macros not expanded.

See macros supported by location for details.

11.2 Frontend improvements

11.2.1 New translations

- Lithuanian

11.2.2 Completed translations

The following translations are 100% completed for this release:

- American English
- Brazilian Portuguese
- French
- German
- Greek
- Japanese
- Russian
- Slovak
- Ukrainian

11.2.3 Updated translations

- American English
- Brazilian Portuguese
- Dutch
- French
- German
- Greek
- Hungarian
- Japanese
- Latvian
- Russian
- Slovak
- Spanish
- Turkish
- Ukrainian

11.2.4 Miscellaneous frontend improvements

- Dashboard performance was improved by reducing the amount of SQL statements.
- Action conditions with deleted objects are handled differently. Starting with Zabbix 2.0.6 if any object (host, template, trigger, etc) that is used in the action condition is deleted, the condition is deleted and the action is disabled to avoid incorrect execution of the action. Before 2.0.6 the missing object was displayed as *unknown* and the condition remained in place.
- The value part of an action condition is now displayed in italics to make action conditions easier to read; like this: Host=*New host*

11.3 Daemon improvements

11.3.1 Improved LLD performance

Previously, low level discovery could generate a large amount of database queries, and even result in deadlocks. Starting with Zabbix 2.0.6, each low-level discovery prototype will be processed in its own transaction, avoiding the deadlocks.

Item prototype processing has also been significantly improved:

- Already discovered items will be updated only if some of their properties have changed.
- Only changed fields will be updated.
- The amount and size of the SQL statements has been reduced.
- Field validation LLD macro resolution has been improved:
    - validity of UTF-8 sequences
    - validity of field length

In a test run, the amount of SQL queries in the initial LLD run was reduced 64 times. In further runs when there are no changes to the discovered entities the amount of SQL queries was reduced 250 times. In further runs when there were changes the amount of SQL queries was reduced 210 times. Note that the total size of SQL queries was reduced even more.

11.3.2 Miscellaneous daemon improvements

The amount of traffic that is exchanged between Zabbix server and Java gateway was reduced.

The Zabbix server escalator process generates alerts while processing escalations. Previously these alerts were not available to the alerter process immediately, but only after the escalator finished its job. This has been fixed by splitting one transaction to handle all escalations into a separate transaction for each, which results in alerts becoming available to the alerter while the escalator is busy.

Logging failed active check connection

Zabbix agent now generates log warnings when an active check connection to server/proxy fails:

```
active check data upload to [127.0.0.1:10051] started to fail ([connect] cannot connect to [[127.0.0.1]:10051]: [111] Connection refused)
active check configuration update from [127.0.0.1:10051] started to fail (cannot connect to [[127.0.0.1]:10051]: [111] Connection refused)
```

and when it is restored later:

```
active check data upload to [127.0.0.1:10051] is working again
active check configuration update from [127.0.0.1:10051] is working again
```

2.0/manual/introduction/whatsnew206.txt · Last modified: 2013/05/02 15:42 by martins-v
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12 What's new in Zabbix 2.0.7

12.1 Frontend improvements

12.1.1 Completed translations

The following translations are 100% completed for this release:

- American English
- Brazilian Portuguese
- French
- German
- Greek
- Japanese
- Russian
- Slovak
- Ukrainian

12.1.2 Updated translations

- Brazilian Portuguese
- Latvian

12.1.3 Value mapping in map labels

Value mapping support has been added in map labels so that raw values can be represented in a human-readable way.

12.1.4 Improved performance of System status widget

The performance of the dashboard *System status* widget has been improved by 3-7% on average for both memory usage and execution time.

12.1.5 Improved performance of SQL query condition calculation

Time required on 100 000 unsorted values has been reduced from 133 seconds to 2.5 seconds. This low-level improvement should help with frontend performance on large installations.

12.2 Daemon improvements

12.2.1 Improved performance with Oracle

Zabbix 2.0.5 improved performance by adding a 2MB prefetch. In some cases, this could lead to worse performance, thus Zabbix 2.0.7 changes the prefetch to be row based, which would improve the performance

in those edge cases.

12.2.2 Improved performance of configuration cache update

Previously, Zabbix used a configuration cache mutex and string pool mutex. Starting with Zabbix 2.0.7, only one mutex is used. This change reduces the amount of time needed for the initial updating of the configuration cache by 20% on average.

12.2.3 Improved proxy performance

Zabbix proxy performance has been improved by reducing the amount of database queries on the proxy side during configuration updates. Previously, configuration updates changed all fields in the records that were to be modified. This has been modified to only update the values that have changed. The improvement is important for Zabbix proxies with a large number of items (hundreds of thousands and more).

12.2.4 Zabbix agent on Solaris

Getting detailed statistics about each CPU on Solaris systems is more efficient in Zabbix 2.0.7. This reduces CPU utilization by Zabbix agent, especially on systems with many cores.

system.swap.size calculation algorithm is changed to imitate “swap -s”.

This change is reverted in Zabbix 2.0.9 where **system.swap.size** is calculated again as in Zabbix 2.0.6 (imitates “swap -l”).

12.2.5 No invalid recovery escalations

Escalation handling has been improved in case of trigger events. Before there was a possibility that for a trigger event invalid records could be added to the escalation table, resulting in extra work on adding/deleting records, which in case of big installations could affect performance of the database.

12.2.6 Zabbix agent on Solaris 64-bit platforms will be compiled as 64-bit application

By default now in case of a 64-bit *Solaris* the agent, sender and get will be compiled as 64-bit applications (previously they were compiled as 32-bit). The reason is that otherwise some functionality like `proc.mem` reports wrong values for 64-bit processes.

If you don't need support for large numbers on a 64-bit platform you will have to recompile Zabbix agent and make sure a compiler produces 32-bit application. Also note that some older compilers produce only 32-bit executables.

12.2.7 Improved performance of zabbix[queue] internal check

Before during queue calculations a configuration lock was made for every active item. Now the queue is calculated without acquiring configuration locks, improving performance on systems with a large number of items.

2.0/manual/introduction/whatsnew207.txt · Last modified: 2013/09/03 18:37 by andris
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13 What's new in Zabbix 2.0.8

13.1 Frontend improvements

13.1.1 Completed translations

The following translations are 100% completed for this release:

- American English
- Brazilian Portuguese
- French
- German
- Greek
- Japanese
- Russian
- Slovak
- Ukrainian

13.1.2 Updated translations

- Dutch

13.1.3 Suppressed warning messages about deprecated mysql extension

Before Zabbix 2.0.8, PHP version 5.5+ users would get a warning message about the mysql PHP extension being deprecated. Starting with Zabbix 2.0.8, warning messages about the deprecated mysql PHP extension are suppressed. *Note*: using the mysqli PHP extension becomes an official requirement in the next major Zabbix 2.2.0 version.

13.2 Daemon improvements

13.2.1 ODBC monitoring improvements

- Before Zabbix 2.0.8 the login timeout for ODBC *Database monitor* items had a fixed value, 5 seconds. Now it is configurable and equal to “Timeout” parameter in server/proxy configuration file (3 seconds by default).
- More detailed ODBC error messages

13.2.2 Improved warnings for messages exceeding size limits

Previously, when a message exceeded size limits Zabbix ignored it by writing a simple warning to the log file:

```
19561:20130806:165515.375 Message size 99999999 exceeds the maximum size 67108864 bytes. Message ignored.
```

In Zabbix 2.0.8, the IP address is added to the warning to identify the message source:

```
19561:20130806:165515.375 Message size 99999999 from IP 10.0.3.1 exceeds the maximum size 67108864 bytes. Message ignored.
```

2.0/manual/introduction/whatsnew208.txt · Last modified: 2013/09/26 10:50 by asaveljevs
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14 What's new in Zabbix 2.0.9

14.1 Frontend improvements

14.1.1 Faster loading graphs

The initial loading of graphs could be noticeably slow, especially with PostgreSQL. This was much improved by faster working SQL statements, significantly (up to 100-1000x) improving the loading times with all databases.

14.1.2 Completed translations

The following translations are 100% completed for this release:

- American English
- Brazilian Portuguese
- French
- German
- Greek
- Japanese
- Russian
- Slovak
- Ukrainian

14.1.3 Updated translations

- Brazilian Portuguese
- Chinese (China)
- Italian
- Lithuanian
- Romanian
- Slovak

14.2 Daemon improvements

14.2.1 Zabbix agent on Solaris

system.swap.size item calculation algorithm is changed back to imitate “swap -l” (as in Zabbix 2.0.6). Zabbix versions 2.0.7 and 2.0.8 imitated “swap -s” calculation, which was later recognized as a mistake.

2.0/manual/introduction/whatsnew209.txt · Last modified: 2013/10/09 10:29 by martins-v
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15 What's new in Zabbix 2.0.10

Zabbix 2.0.10 is not released yet.

15.1 Frontend improvements

15.1.1 Improved global script API calls

The loading speed of several Monitoring section screens (Last 20 issues, Latest data, Status of triggers, Latest events, ...) with a large number of global scripts was improved.

15.1.2 Completed translations

The following translations are 100% completed for this release:

15.1.3 Updated translations

- American English
- Brazilian Portuguese
- Czech
- Dutch
- French
- German
- Greek
- Japanese
- Italian
- Romanian
- Russian
- Slovak
- Spanish
- Ukrainian

15.2 Daemon improvements

Sometimes, connection problems could have been interpreted as erroneous data package and thus misleading “Message size exceeds the maximum size bytes” would be reported instead. Since 2.0.10, the correct error message will be reported.

2.0/manual/introduction/whatsnew210.txt · Last modified: 2013/11/08 12:35 by richlv
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